

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Request of PTC-220, LLC for Waivers of)	WT Docket No. 08-256
Certain 220 MHz Rules)	
)	
Construction Progress Report)	

To: Chief, Wireless Telecommunications Bureau

**PTC-220, LLC
CONSTRUCTION PROGRESS REPORT**

I. INTRODUCTION

PTC-220, LLC (“PTC-220”) submits this Construction Progress Report to satisfy the requirements of paragraph 16 of the Memorandum Opinion and Order (“*2009 Waiver Order*”) adopted by the Federal Communications Commission (“FCC”) on June 25, 2009.¹ This Report details the progress made during the past six months in implementing the Systemwide Build-out Plan (the “Build-out Plan”) submitted by PTC-220 on November 1, 2010 in the above-referenced docket. The Build-out Plan explained how PTC-220’s 220 MHz licenses (“Licenses”) would be used in deploying a nationwide positive train control (“PTC”) system, as required by Federal statute.² The construction of the Licenses will be undertaken in large part by each of PTC-220’s

¹ *Request of PTC-220, LLC for Waivers of Certain 220 MHz Rules*, Memorandum Opinion and Order, 24 FCC Rcd 8537 (2009).

² In October 2015, Congress extended the PTC implementation deadline from December 31, 2015 to December 31, 2018. *See* Positive Train Control Enforcement and Implementation Act of 2015, Pub. L.

member railroads,³ although PTC-220 will also coordinate construction activities by non-member railroads.

II. SITE BUILD-OUT ACTIVITY

Since the November 1, 2016 Report,⁴ PTC-220's member railroads have continued to build new or prepare existing base station sites and install base station radios. As before, preparatory work at existing sites includes, among other things, coverage predictions, design and installation of antenna systems, upgrading of site power systems, site pre-wiring, and backhaul design. The table below indicates the progress to date for each PTC-220 member railroad, by state, for base station site preparation and base radio installations. Some of the installed radios are being actively used in various field testing programs, while others are currently powered off, awaiting final frequency coordination.

No. 114-73 § 1302, 129 Stat. 568 (2015) ("*2015 PTC Act*"); 49 U.S.C. § 20157(a)(1). In light of the new statutory deadline, PTC-220 in December 2015 filed requests for a further extension of its substantial service deadlines until December 31, 2018. The FCC granted these requests in March 2016.

³ PTC-220's members are BNSF Railway ("BNSF"), Canadian National Railway ("CN"), Canadian Pacific Railway ("CP"), CSX Transportation ("CSX"), Kansas City Southern Railway ("KCS"), Norfolk Southern Railway ("NS"), and Union Pacific Railroad ("UP").

⁴ *Request of PTC-220, LLC for Waivers of Certain 220 MHz Rules*, PTC-220, LLC Construction Progress Report, WT Docket No. 08-256 (October 30, 2015).

State	BNSF		CN		CP		CSX		KCS		NS		UP	
	Site Prep	Radio	Site Prep	Radio	Site Prep	Radio	Site Prep	Radio	Site Prep	Radio	Site Prep	Radio	Site Prep	Radio
AL	4	4	2	0			46	44			45	45		
AR	7	7							9	9			28	28
AZ	21	21											13	13
CA	41	39											109	109
CO	21	20											60	60
FL							20	20			2	2		
GA							32	27			40	40		
IA	26	25	12	0	24	24							26	26
ID	5	5											24	24
IL	42	41	34	27	6	5	23	22	5	1	23	23	53	53
IN			3	2			47	45			28	28		
KS	38	37							3	3			36	36
KY			4	3			82	81			14	14		
LA	6	5	7	6			1	1	29	29	2	2	21	21
MA							11	10						
MD							37	36			3	3		
MI			18	11			5	5						
MN	36	36	10	4	26	17							3	3
MO	40	40			7	7			14	11	7	7	34	34
MS	3	3	25	12			3	3	11	8	11	11		
MT	71	67												
NC							43	43			26	26		
ND	54	54			15	14								
NE	32	32											37	37
NJ							5	5						
NM	16	16											15	15
NV													58	58
NY					13	13	56	54			4	4		
OH			1	1			65	64			23	23		
OK	26	26							6	6			10	10
OR	2	2											81	81
PA							58	54			46	33		
SC							49	47			22	22		
SD	10	10												
TN	2	2	6	6			64	60			29	29	1	1
TX	64	58							25	19			137	137
UT													42	42
WA	53	52											18	18
WI	3	3	28	19	14	14							15	15
WV							95	93			9	9		
WY	1	1											28	28
VA							54	52			31	31		
Total	624	606	150	91	105	94	796	766	102	86	365	352	849	849

Totals	
Site Prep	Radio
2991	2844

In addition to the base station deployment programs, PTC-220 member railroads are installing mobile radios in their locomotive fleets.

III. SPECTRUM

As previously reported, the two different PTC technologies, I-ETMS (used by freight railroads) and ACSES (used by passenger railroads) have the potential to desensitize each other's receivers, creating harmful interference when the two systems are operated in close geographic and spectral proximity. PTC-220 identified greater Philadelphia and New England as the two areas along the Northeast Corridor where this interference scenario is predicted to be a serious problem. In an effort to resolve this interference issue, PTC-220 has been actively pursuing the acquisition of additional spectrum in these areas that could be used to provide for greater spectral separation between the two systems.

Philadelphia Area. The resolution of the interference situation in the Philadelphia area is almost complete. In January 2016, PTC-220 consummated the acquisition of 218 MHz Service license KIVD0007 covering portions of the Philadelphia area. However, this license did not cover all of the needed counties; the spectrum for those counties was held in the FCC's inventory. Therefore, in March 2016, PTC-220 submitted an application for license modification, requesting that 250 kHz of the spectrum from KIVD0007 be exchanged for 250 kHz of spectrum from the FCC's inventory covering the additional counties. This application was granted in March 2017. PTC-220 then filed applications for the assignment of the relevant spectrum to the two commuter railroads in the area, the Southeastern Pennsylvania

Transportation Authority (“SEPTA”) and New Jersey Transit (“NJT”). These applications were granted in April. The transaction with SEPTA has been consummated, and the transaction with NJT is expected to close later this month.

New England. Despite some important progress, the situation in New England still remains partially unresolved. As reported previously, PTC-220 entered into an agreement to purchase 217 MHz (AMTS) spectrum in the relevant areas. The assignment application for that spectrum was consented to and the transaction was closed in December 2016. PTC-220 believes it is close to finalizing an agreement for exchange of some of this 217 MHz spectrum for 220 MHz spectrum held by a passenger railroad operating in the area, which will resolve the interference issue with regard to this railroad. Progress was also been made on an agreement to clear the incumbent licensee from that spectrum. It is expected that this clearing transaction will be finalized later this month.

However, after negotiating the first 217 MHz acquisition, PTC-220 later learned that additional spectrum was needed for the other railroad operating in New England. PTC-220 acquired additional 217 MHz spectrum through a second partitioning transaction, but that spectrum remains subject to a condition tied to the renewal of the larger underlying license. That renewal application has been opposed by a third party, and is awaiting action by the FCC. Moreover, further analysis by the railroad operating in the area reveals that even more spectrum will be needed, so PTC-220 has begun negotiations for that additional amount, although any such acquisition would also be subject to the same renewal condition. PTC-220 is becoming increasingly concerned that the inability to obtain spectrum in this area that is not subject to a condition could delay the deployment of PTC in portions of New England.

Non-Member Spectrum Leases. PTC-220 currently has active spectrum manager leases with several non-member railroads including CalTrain, MetroLink, North Country Transit District, Metra and Sound Transit. A spectrum manager lease has been signed with the Terminal Railroad Association of St. Louis and is in the process of submission to the FCC. In addition, Amtrak, Conrail, and Metro North have signed testing leases. PTC-220 is in active leasing negotiations with three other non-member railroads, and PTC-220 anticipates future negotiations with an additional eight railroads. Some short-line railroads may also need a long-term spectrum lease, depending on the PTC requirements of their owned track.

IV. INTERNATIONAL CROSS-BORDER SPECTRUM ARRANGEMENTS

At the time of filing the last progress report, a new U.S.-Mexico agreement that would allow deployment of PTC in the Mexico border region still remained to be finalized. The lack of a signed agreement resulted in the halting of PTC deployment on ten different Union Pacific Railroad subdivisions, representing a significant portion of its rail network. Because of the delay, PTC-220 filed a request for special temporary authority (“STA”) to allow operations near the Mexican border until the new agreement went into effect.

PTC-220 is pleased to report that the finalized agreement with Mexico was released on December 6, 2016. After confirming that the new agreement contained all necessary changes to allow the deployment of PTC in the border region, PTC-220 withdrew its STA request.

V. CONCLUSION

During the past six months, PTC-220 has continued to focus on resolving the final spectrum issues along the Northeast Corridor. PTC-220 is pleased that transactions to solve the issues in the Philadelphia area should be completed later this month. However, the situation impacting a significant portion of the greater Boston area remains largely unresolved. Even after expending considerable sums to acquire and clear spectrum, PTC-220 has found that the final pieces needed are tied up in contested regulatory proceedings and are not able to be assigned. PTC-220 will need the FCC's assistance in quickly resolving this situation, or the railroads in this area will not be able to deploy PTC consistent with the statutory mandate.

Respectfully submitted,

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